

REMARKS

Claims 1-23 and 26-32 have been withdrawn from the present application due to a restriction requirement and therefore claims 24 and 25 are currently pending.

Applicants gratefully acknowledge the Examiner's indication that claim 25 contains allowable subject matter. Claim 25 has accordingly been rewritten in independent form.

Regarding the drawing objection, a complete set of replacement formal drawings including all of the Figures (1 to 30) of the present application are attached herewith. It is submitted that the replacement formal drawings meet with the requisite drawing standards. Withdrawal of the objection to the drawings is therefore respectfully requested.

Claim 24 has been rejected under 35 U.S.C. §102(b) as being anticipated by Haas, U.S. Patent No. 5,311,346.

As regards the anticipation rejections of the claims, to reject a claim under 35 U.S.C. § 102(b), the Office must demonstrate that each and every claim feature is identically described or contained in a single prior art reference. (*See Scripps Clinic & Research Foundation v. Genentech, Inc.*, 18 U.S.P.Q.2d 1001, 1010 (Fed. Cir. 1991)).

Claim 24 recites a method for compensating for phase noise, chromatic dispersion and high order PMD effects electronically that includes steps of: receiving a set of I and Q data streams; in a first stage, compensating for frequency-independent phase noise and outputting to a second stage; and in a second stage, compensating for frequency dependent chromatic dispersion and high order PMD effects.

It is submitted that Haas does not disclose these features of claim 24. Haas merely refers to a system and method of aligning the polarization of light into an optical fiber to one of the primary states of polarization using a polarization controller. *See* Haas, col. 3, lines 33-37. Referring specifically to Figure 2, Haas teaches splitting an incoming signal into two signals having 90-degree apart polarization and then separately processing them in order to "select the output from the receiver with the lower BER [bit error rate] as the output bits." Haas, col. 6, lines 25-27. Thus, the circuit of Figure 2 merely adjusts the polarization controls for each signal to achieve low bit error rates and then selects, through determining the bit error rate of each received signal, the better signal to use for reception.

It is not understood how the teachings of Haas disclose compensating for frequency-independent distortion in a first stage and then compensating for frequency-dependent distortion in a second stage. In particular, Haas *does not refer to frequency-dependent distortion at all* and merely indicates that “higher-order effects of PMD can also make the BER of the two PSP’s differ”. Haas, col. 6, lines 20-22. In this case, there is no distinction between first order and higher-order PMD – they are both compensated in the same manner in a single stage.

In short, Haas only discloses one compensation stage in which it reduces PMD distortion by adjusting polarization controllers according to the “gradient descent technique”. See Haas, col. 4, lines 3-35. The latter selection step is not a “compensation” step at all, but merely a final decision stage that determines which of the split-polarized signals has less distortion. In contrast, the present invention describes compensating for phase noise and first-order polarization mode in a first stage, then outputting the signals from the first stage to a second stage, at which filters are applied to compensate for higher-order PMD and frequency-dependent effects. See specification, page 39, lines 4-16. These distinct compensation stages are not disclosed or in any way suggested by the Haas reference.

In light of the above, it is accordingly submitted that Haas does not disclose (or even suggest) the features of independent claim 24.

Withdrawal of the anticipation rejection of claim 24 based on Haas is therefore respectfully requested.

CONCLUSION

All issues having been addressed, it is believed that the present application is in condition for allowance. Prompt reconsideration and allowance of the present application are respectfully requested.

Respectfully submitted,

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Dated: August 16, 2004

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